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REVIEW OF THE EFFICIENCY OF THE ADMINISTRATIVE AND FINANCIAL FUNCTIONING OF THE UNITED NATIONS

Note by the Secretary-General

The Secretary-General has the honour to transmit to the members of the General Assembly the report of the Joint Inspection Unit entitled "Management of buildings in the United Nations system" (JIU/REP/92/9).

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ANNEX

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JIU/REP/92/9
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MANAGEMENT OF BUILDINGS IN THE UNITED NATIONS SYSTEM

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SUMMARY OF RECOMMENDATIONS

RECOMMENDATION ONE: MAINTENANCE OF BUILDINGS

THAT EXECUTIVE HEADS AND GOVERNING BODIES OF ORGANIZATIONS OF THE UNITED NATIONS SYSTEM ASSURE SUFFICIENT AND REGULAR FUNDING OF BUILDING MAINTENANCE TO ENABLE BUILDING MANAGERS TO:

A) CARRY OUT PREVENTIVE MAINTENANCE AND PRE-MAINTENANCE SCHEDULES WITH RESPECT TO INSTALLATIONS, SERVICES AND EQUIPMENT;

B) ESTABLISH AND MAINTAIN MONITORING AND INSPECTION SYSTEMS;

C) BENEFIT FROM THE ABILITY TO ACCOMPLISH TIMELY MAJOR REPAIRS AND REPLACEMENTS THROUGH THE ESTABLISHMENT OF BUILDING FUNDS SUPPORTED BY FIXED ANNUAL CONTRIBUTIONS.

RECOMMENDATION TWO: BUILDING CONSTRUCTION AND DESIGN

THAT EXECUTIVE HEADS OR OTHER COMPETENT AUTHORITIES ASSURE THAT BUILDING MANAGERS PARTICIPATE IN THE DESIGNING OR REMODELING OF BUILDINGS SO THAT THEIR CONCERNS ARE TAKEN FULLY INTO ACCOUNT THROUGHOUT THE PLANNING AND CONSTRUCTION PROCESS.

RECOMMENDATION THREE: CONTRACTORS VS. IN-HOUSE STAFF

THAT BUILDING MANAGERS PERIODICALLY REVIEW THE BALANCE BETWEEN THE USE OF IN-HOUSE STAFF AND OUTSIDE CONTRACTORS FOR PERFORMING BUILDING SERVICES FROM THE VIEWPOINTS OF PERFORMANCE, RELIABILITY AND COST-EFFECTIVENESS. WHERE

CONTRACTING IS SELECTED, BUILDING MANAGERS SHOULD ASSURE THE EFFICIENCY AND EFFECTIVENESS OF WORK DONE BY ARRANGING REGULAR AND COMPETENT INSPECTION BY RELIABLE IN-HOUSE STAFF, BY INSERTING ENFORCING CLAUSES IN THE CONTRACTS PENALIZING NON-PERFORMANCE AND BY ESTABLISHING "HOT LINES" TO REGISTER STAFF COMPLAINTS.

RECOMMENDATION FOUR: MEETINGS OF BUILDING MANAGERS

THAT THE ACC'S CONSULTATIVE COMMITTEE ON ADMINISTRATIVE QUESTIONS SCHEDULE MEETINGS ON IMPORTANT BUILDING MANAGEMENT QUESTIONS IN ORDER THAT BUILDING MANAGERS CAN ADDRESS THESE QUESTIONS AND CONCURRENTLY EXCHANGE VIEWS AND BENEFIT FROM SHARED EXPERIENCES.

I. INTRODUCTION

1. In response to a request from a participating organization, the Joint Inspection Unit (JIU) included in its work programme a study on the management of buildings in the United Nations system. In the course of the study, Inspectors thoroughly examined major buildings and building management practices in Geneva, Montreal, Vienna and Washington D.C.. These included the Office of the United Nations at Geneva and the Headquarters buildings of IAEA, ICAO, ILO, WHO, WIPO, WMO, ITU, UNOV, UNIDO, the World Bank and the Pan-American Health Organization(PAHO). Consultations also took place at FAO in Rome and at United Nations Headquarters in New York. For purposes of comparison, Inspectors visited a number of governmental buildings outside of the United Nations system.

2. Inspectors had hoped to develop specific, quantitative guidelines on such building management tasks as cleaning (e.g., target costs per square meter), window washing (e.g., target costs per glass area), maintenance schedules and the like. They had wished to produce system-wide comparative tables on the costs involved in managing buildings along the lines of the cleaning guidelines contained in the publication Office Building Cleaning Operations in North America (A study of Custodial Management Practices and Costs) produced in 1990 by the Building Owners and Managers Association International. Much to their disappointment, Inspectors found, after a representative sampling of buildings in the United Nations system, that such specificity was simply not possible because of striking dissimilarities in building environments, in building occupancy, in building tenancy arrangements and, above all, in the age, size, and characteristics of the buildings themselves. What was common in

the management of buildings proved to be very general, what was specific in the management of buildings was almost always unique. Thus, for the above reasons, they decided against publishing so-called comparative figures which would be in fact incomparable. To do so would be highly misleading and grossly unfair.

3. As a result of this finding, the recommendations of Inspectors necessarily reflect what all good managers of buildings already know but often have difficulties in applying because of insufficient resources. Thus, it is quite clear that adequate and regular funding of maintenance is much less expensive in the medium and long term than feast-or-famine budgeting. It is also clear that building managers should be intimately involved in the planning and construction of new buildings and the remodeling of old buildings. It is clear that the balance between the utilization of contract employees and the development of in-house staff must be carefully analyzed in the light of local conditions in order to reach the most efficient and economical solution. Subsequent chapters will deal with these and other precepts in the hope that if governing bodies find them persuasive they will assist the managers of buildings in what is one of the most challenging and difficult administrative functions in the United Nations system.

4. Inspectors had planned to examine the management of major buildings at IMO in London, UNESCO in Paris, UPU in Bern and the regional economic commissions outside Europe, as well as studying the Headquarters of FAO and the United Nations in greater depth. However, when meaningful quantitative comparisons proved impossible because of the diversity of buildings and certain general recommendations became obvious, Inspectors realized that

further investigation would not be cost-effective. Additional coverage, with attendant expenditures of time and money, could not reasonably be expected to modify the report's conclusions and recommendations.

5. The report follows the experimental action-oriented format employed in Managing Works of Art in the United Nations (JIU/REP/92/7) whereby the large amount of accumulated background material is but briefly summarized and the bulk of the report is concentrated on major problems and recommendations for their amelioration.

6. The authors regret the untimely death on March 10, 1992 of Inspector Norman Williams who had been heavily involved in the information-gathering phase of this study. They are most grateful for his valuable contribution. They are grateful as well to all the building managers who gave so freely of their time and expertise to educate Inspectors on the complexities of the management of buildings.

II. BACKGROUND INFORMATION

7. Managing buildings in the United Nations system is by any measure a big job. Some idea of the magnitude of the responsibilities of building managers can be gleaned from a recent estimate which places the value of the land and buildings owned by the United Nations at more than 2.5 billion dollars. Construction and financing costs for the Vienna International Centre (the VIC), borne by the Austrian government and the city of Vienna, amounted to about nine billion Austrian schillings. Annual maintenance costs at the VIC, including in-house salaries; parts, materials and contracts; utilities and cleaning were AS 210,000,000 in 1989. These figures, pertaining to only a part of the infrastructure of the United Nations system, suffice to illustrate the dimensions of the buildings management function. The physical plant of the United Nations system is both a major repository of the cumulative investment of Member States and a major recurring charge on the budgets of the constituent international organizations.

8. As impressive as the size of the physical plant is the range of functions included in the management of buildings in the United Nations system. Although all managers are not responsible for all functions and a varying proportion of the work is carried out under outside contract, most managers are responsible for most of the following functions:

I. **Maintenance responsibilities**

A. **Planning and scheduling of maintenance, including**

1. Pre-maintenance (adjusting to anticipated changes in building structure or equipment)
2. Preventive maintenance

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B. Operational maintenance, with respect to

1. Heating
2. Cooling
3. Ventilation
4. Sanitary systems
5. Lighting
6. Telephone equipment and installation
7. Electric cable installation
8. Fire alarm systems
9. Elevators and escalators

C. Maintenance capabilities, in-house or supervisory

1. Metal work
2. Carpentry
3. Painting
4. Locksmith
5. Upholstery
6. Carpets
7. Masonry
8. Plumbing
9. Cleaning
10. Grounds maintenance
11. Gardening
12. Office furnishings
13. Electrical work
14. Photography

D. Control, monitoring, inspection and evaluation

II. Administrative responsibilities

A. Building design and construction
B. Layout and allocation of office space
C. Rental of premises
D. Use of contractual services
E. Common services arrangements
F. Insurance
G. Security (surveillance and alarm systems)
H. Occupational safety and health
I. Information and transport services
J. Stock control
K. Financial planning and control
L. Budget preparation and justification
M. Conference equipment servicing

There is some overlapping of the above-mentioned activities but the listing is by no means inclusive of the totality of functions handled by building managers. By any measure the responsibilities are large.

9. In most instances, the building management functions are assigned to the administrative departments or services of United Nations system organizations. However, in two instances the arrangements are somewhat special. At the Vienna International Centre, most of the building management functions pertaining to IAEA, to the United Nations Office in Vienna and to UNIDO are assigned to the latter under common service arrangements. And in Montreal, major maintenance, most operational maintenance and the cleaning of the building (which the Canadian Government rents for use by ICAO) are all the responsibility of the building's owner.

10. The bulk of the staff involved in building management functions are in the General Services. Their special craft skills (e.g., electrician, carpenter, painter, plumber) and familiarity with local machinery and safety regulations are indispensable to effective performance. Managerial and key supervisory positions are somewhat less specialized, although often staffed by engineers, and are carried at the professional level. In general, there tends to be a stratification by skill category and little scope for career development although several managers have endeavored to carry out cross-training to facilitate upward staff mobility.

III. RECOMMENDATIONS

RECOMMENDATION ONE: MAINTENANCE OF BUILDINGS

THAT EXECUTIVE HEADS AND GOVERNING BODIES OF ORGANIZATIONS OF THE UNITED NATIONS SYSTEM ASSURE SUFFICIENT AND REGULAR FUNDING OF BUILDING MAINTENANCE TO ENABLE BUILDING MANAGERS TO:

A) CARRY OUT PREVENTIVE MAINTENANCE AND PRE-MAINTENANCE SCHEDULES WITH RESPECT TO INSTALLATIONS, SERVICES AND EQUIPMENT;

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C) BENEFIT FROM THE ABILITY TO ACCOMPLISH TIMELY MAJOR REPAIRS AND REPLACEMENTS THROUGH THE ESTABLISHMENT OF BUILDING FUNDS SUPPORTED BY FIXED ANNUAL CONTRIBUTIONS.

11. Absolutely no one with whom Inspectors spoke, at whatever level or field of specialization, disagreed with the common-sense dictum that saving money at the expense of adequate building maintenance is both dangerous and expensive in the medium or long term. Yet, Inspectors have found that, faced with severe financial constraints, virtually all governing bodies of United Nations organizations have appreciably reduced their budgets in real terms for building management and maintenance. In response, building managers have necessarily cut staff, deferred the frequency and scope of maintenance, postponed the purchase of needed replacement parts and equipment and granted service contracts solely on a cost basis.

12. Without attempting an opinion on what effect these measures have on staff efficiency, an opinion which is largely subjective, Inspectors have been able to observe the effects of infrequent deferred maintenance on a number of buildings they inspected. As noted in the Introduction, Inspectors viewed a number of governmental buildings outside of the United Nations system in order to establish bases of comparison. Of these, the worst case was the building of the United States Department of State which has a large backlog of building deficiencies because of under-funding of maintenance over long periods. The best case was the adjoining building of the United States Federal Reserve where virtually everything was in perfect condition as a result of steady and predictable financing over the life of the building. In both cases, building managers were able and conscientious but one had the resources to do what was needed and the other did not.

13. Between the worst and best cases lie the buildings of the United Nations system visited by Inspectors. There the effects of under-funding of maintenance could be observed in instances of deterioration of premises and equipment and the clear prospect of greatly increased repair and replacement costs in the future. There also could be noted measures of economy and efficiency taken by resource-conscious building managers as well as examples of good maintenance practices made possible by adequate and regular funding.

14. In the field of pre-maintenance (adjusting to anticipated changes in building structure or equipment), UNIDO officials, who manage the VIC complex, have had the foresight to replace worn out malfunctioning original equipment with standardized parts.

Because the original equipment is no longer available, it is more cost-effective to replace rather than repair it. Inspectors believe that resources should be made available to building managers throughout the United Nations system who can demonstrate, as UNIDO managers have done, the most efficient and economical solution to problems of availability of equipment and parts and the comparative costs and timing of their repair versus their replacement.

15. Preventive maintenance is widely practiced in the United Nations system. Virtually all managers have regularly scheduled inspections, servicing of equipment and replacement of items subject to predictable wear. In many cases (e.g., the VIC, the World Bank) managers employ periodic computerized print-outs of maintenance, servicing or replacement tasks.

16. Some organizations (e.g., ILO, UNOG, WIPO and the VIC units) have electronic control centres for monitoring building services and conditions. Thus, the centres at the VIC and ILO observe space temperatures, humidity, illumination levels; the metering of electricity, fuel and heating; as well as security against fire or intrusion. It is apparent to Inspectors that as buildings are increasingly equipped with modern technological devices, the need for constant and more sophisticated monitoring increases commensurately.

17. Certain of the United Nations system organizations benefit from the existence of strict local regulations. The Geneva, Vienna and Washington based agencies are assisted by regular inspection visits by local authorities who monitor air, water and food levels of toxicity. Managers at the Pan American Health Organization (PAHO) observe that the need for knowledge of local regulations and standards virtually dictates that building maintenance personnel be local people.

18. Finally, adequate funding of maintenance and major repairs and replacements is assisted by the existence of building funds. Thus, PAHO has a replenishable fund of up to $500,000 which it uses to fund necessary maintenance and repair costs above $20,000. At the Vienna International Centre, the three resident United Nations organizations and the Austrian Government each contribute $25,000 annually to a common fund, which had a balance of $1,560,388 at the end of 1991. In addition to that, the IAEA, UNIDO and UNOV are each expected to pay an amount not to exceed $125,000 per year to cover the cost of major repairs and replacements carried out according to plans elaborated by the UNIDO Buildings Management Section, reviewed by the Permanent Technical Working Group and approved by the Joint Committee to Administer the Common Fund for Major Repairs and Replacements at the VIC. Because the ceiling limit of $375,000 for the three resident organizations has been exceeded in recent years, the Austrian Government has been paying the difference, amounting to approximately $650-675,000 annually. In the opinion of Inspectors, such building funds have worked well and, with necessary adjustments to local conditions, are worthy of emulation by other United Nations system organizations.

RECOMMENDATION TWO: BUILDING CONSTRUCTION AND DESIGN

THAT EXECUTIVE HEADS OR OTHER COMPETENT AUTHORITIES ASSURE THAT BUILDING MANAGERS PARTICIPATE IN THE DESIGNING OR REMODELING OF BUILDINGS SO THAT THEIR CONCERNS ARE TAKEN FULLY INTO ACCOUNT THROUGHOUT THE PLANNING AND CONSTRUCTION PROCESS.

19. Because building managers have to maintain and operate their buildings, it would seem axiomatic that their concerns be factored into building remodeling or construction. This would appear even more necessary as buildings more and more come to resemble a complicated machine with such installations and equipment as year-round heating and cooling systems, stand-by electricity-generating equipment, automatic document conveyors, and an organization-wide linked computer system. Despite the efficiencies to be realized by consulting building management staff, all too frequently buildings are planned, built or remodeled without their input being sought or received. In a number of instances, United Nations organizations have had to try to fit into buildings designed by others for quite different purposes. Obviously, the role of building manager, and, for that matter, the efficiency of the organization would be favorably affected if the planning and design process were controlled by the organization itself with input from its building managers.

20. Where building management concerns are not reflected in the building design, serious problems can arise. In the case of WHO's principal building, its siting on the wrong axis with respect to the sun, coupled with its heavy glass and aluminum façade, make appropriate temperature control virtually impossible. Reference has already been made to the problems encountered at the VIC because of initial installations of non-

standard equipment. And of course the Palais des Nations at Geneva has been trenchantly described as world-class dysfunctional. Even the new UNOG building has serious deficiencies affecting building management, particularly an egregious lack of storage space, poorly designed shop areas and floors with inadequate load-bearing capabilities.

21. More positively, in one recent case, WIPO's modification of its BIRPI building, the Section of Buildings and Maintenance participated actively in the designing process. Since the re-modeling involved replacement of the glass façade, construction of a new floor and the installation of air-conditioning equipment, input by building managers was clearly necessary.

RECOMMENDATION THREE: CONTRACTORS VS. IN-HOUSE STAFF

THAT BUILDING MANAGERS PERIODICALLY REVIEW THE BALANCE BETWEEN THE USE OF IN-HOUSE STAFF AND OUTSIDE CONTRACTORS FOR PERFORMING BUILDING SERVICES FROM THE VIEWPOINTS OF PERFORMANCE, RELIABILITY AND COST-EFFECTIVENESS. WHERE CONTRACTING IS SELECTED, BUILDING MANAGERS SHOULD ASSURE THE EFFICIENCY AND EFFECTIVENESS OF WORK DONE BY ARRANGING REGULAR AND COMPETENT INSPECTION BY RELIABLE IN-HOUSE STAFF, BY INSERTING ENFORCING CLAUSES IN THE CONTRACTS PENALIZING NON-PERFORMANCE AND BY ESTABLISHING "HOT LINES" TO REGISTER STAFF COMPLAINTS.

22. A key issue facing most building managers is how to determine and then obtain, the optimum mix between the use of in-house staff and the use of external contractors. In practice, virtually all the organizations utilize external contractors to a greater or lesser extent for cleaning, window-washing, elevator repairs, inspection of fire alarms and smoke detectors and for maintenance, as well as some specialized work beyond the capacity of in-house staff. The practice at ICAO represents an extreme case in that its building management function is almost entirely carried out by a real estate company.

23. Typically, contracts for building services are let in accordance with a bidding procedure contained in an organization's financial rules and regulations. These procedures usually call for competitive bidding which may be open or subject to pre-certification. Contracts are characteristically given for a specified period of time or for the execution of a precise task. Award to the low bidder is frequently not required unless expected performance standards of bidders are adjudged equal. Whatever the details, what is important is that the contract provide a strong motivation for the contractor to perform work

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which meets or exceeds requirements. Thus, certain organizations have included "penalty clauses" in their contracts, which penalize contractors, usually financially, in case of non-execution or sub-standard execution of prescribed tasks. In general, penalty clauses have been very useful in assuring adequate performance standards.

24. Cost factors play a key role in the determination of contracting out. Organizations must constantly review the cost-effectiveness of engaging external contractors. Most have found that, in developed countries, differing wage rates and work practices from city to city preclude a meaningful system-wide comparison of realizable costs. For example, the labour market in New York is very competitive offering good rates through bidding. On the other hand, the Western European market is more subject to cartelization and is therefore not as competitive as in the United States of America. In one European site, organizations began by entrusting major maintenance tasks to local external contractors. After several years, high costs and mediocre service dictated their replacement by in-house staff and net savings were the result. Increased flexibility also accrued because the in-house staff's familiarity with the buildings allowed workmen to develop efficient routings. In other European locations with wage rates lower than United Nations salary scales external contracting has often proven to be the better choice.

25. When buildings are located in the same city and share the same conditions, conclusions can be drawn with greater confidence. A management survey conducted by WHO found that "comparison of the building maintenance costs of WHO, Nestlé, ILO and Palais des Nations, demonstrates that a policy in favour of subcontracting increases the opportunity for lower costs. This opportunity results both from a greater selectivity in initiating work and from the avoidance of carrying unused internal staff

capacity or generating relatively less important work and additional expenses to make use of such capacity".*/

26. Many building managers have emphasized to Inspectors that supervision by internal staff is essential to extracting maximum benefits from the use of external contractors. Although contract specifications are important they are not enough. Building managers must provide for supervision of compliance with specification of programmes and must assess the results. Some organizations (e.g., UNOG) have sought assistance from staff by establishing "hot lines" whereby complaints for inadequate cleaning and maintenance work can be brought quickly to the attention of management. This type of arrangement is very effective, particularly when integrated with daily inspection tours to check the results. Another approach is to enlist staff and visitors in building upkeep by publicizing requests for co-operation and responsible behavior in an effort to minimize maintenance and cleaning problems.

27. While contracting generally provides an opportunity for cost reduction there are pros and cons. Favouring contracting are often better staff utilization (avoidance of over-staffing) and cost savings. Drawbacks of contracting include: undue dependence on staff not subject to the building managers' direct control, and loss of flexibility, particularly in meeting unusual requirements or responding to emergencies. What these opposing factors imply is that each building manager must regularly decide for his organization the optimum mix between contracting out and maintaining an in-house staff.

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*/ WHO, Building Management at Headquarters, Management Survey Report, No. 114, May 1983, p. 33. For income/expense analysis for office buildings in cities in USA, see 1990 BOMA Experience Exchange Report, Building Owners and Managers Association International (BOMA), 1990, Washington, D.C., USA.

RECOMMENDATION FOUR: MEETINGS OF BUILDING MANAGERS

THAT THE ACC'S CONSULTATIVE COMMITTEE ON ADMINISTRATIVE QUESTIONS SCHEDULE MEETINGS ON IMPORTANT BUILDING MANAGEMENT QUESTIONS IN ORDER THAT BUILDING MANAGERS CAN ADDRESS THESE QUESTIONS AND CONCURRENTLY EXCHANGE VIEWS AND BENEFIT FROM SHARED EXPERIENCES.

28. Meetings of experts are frequently viewed as one of the most serious inefficiencies in the United Nations system. Precisely because the experts are expert, it is difficult for budget controllers and legislative bodies to assess the value of periodic sessions which have been taking place for years and have come to be regarded as permanent perquisites of particular positions or individuals.

29. Nevertheless, Inspectors see considerable possibilities for advantage in exchanges of views and information between building managers who, despite the very great differences in their building structures and arrangements, have a hard core of similar responsibilities. There is a commonality of concern in such building management areas as contracting, insurance, security, technical training and technologies.

30. In the opinion of Inspectors, the ACC's Consultative Committee on Administration is the best qualified and most appropriate body in the United Nations system to identify important questions of building management and to schedule meetings attended by building managers in order to resolve these questions in the most cost-beneficial way. An incidental, but valuable, by-product of such meetings is their general potential for stimulating managerial improvements, economies of operation and perhaps even co-operative arrangements through face-to-face interaction among building managers.